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10/676,233	10/01/2003	Edward Y. Qian	1497/2	6397

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EXAMINER	
CHU, WUTCHUNG	
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11/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/676,233	QIAN ET AL.	
	Examiner	Art Unit	
	Wutchung Chu	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-39,41 and 42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *2-8,10-26,29,32 and 33* is/are allowed.

6)☒ Claim(s) *9,27,28,30,31,34-36,41 and 42* is/are rejected.

7)☒ Claim(s) *37-39* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This communication is in response to application's amendment filed on 9/11/2007. Claims 2-39 and 41-42 are pending.

Claim Rejections - 35 USC § 103

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 9, 27-28, 30-31, 34-36, and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. hereinafter Lin, (US6633563).

Regarding claim 9, Lin discloses a assigning a cell data to one of several processors provided in a data switch **(see col. 2 lines 27-35)** comprising:

a. Pooling voice server resources provided by a plurality of voice chips in the media gateway **(see col. 2 lines 29-30 one of multiple processors provided in the internet service node)**;

b. for each new call/session **(see col. 2 line 50)**, dynamically allocating a voice chip from the pooled voice server resources wherein dynamically allocating a voice chip from the pooled voice server resources includes allocating the voice chip independently of a remote endpoint assigned to each session **(see col. 2 lines 31-35 Each IP packet may be associated with a subscriber and the P packets corresponding to a subscriber may need to be assigned to a processor designed to provide the service policies desired by the subscriber)**;

c. dynamically assigning a logical resource identifier to each session **(see col. 11 lines 45 tunnel ID assigned)**;

d. and sending a plurality of voice packets relating to the call/session to the external networks **(see col. 8 lines 5-13 transmission to the trunk line card)**;

e. processing voice packets **(see col. 2 line 50)** associated with each session using the voice chip dynamically assigned to the session **(see col. 2 lines 31-35 Each IP packet may be associated with a subscriber and the P packets corresponding to a subscriber may need to be assigned to a processor designed to provide the service policies desired by the subscriber)**.

Lin does not explicitly teach:

- receiving a plurality of voice packets relating to a call/session from a plurality of different external networks. However, Lin discloses different access technologies **(see col.5 lines 40-46)** and in the background of Lin also discloses data

switches are often used in a telecommunication network to provide connectivity between different end systems. Computer systems accessing each other are examples of end systems. A telecommunication network may include different types of equipment such as access multiplexers, modems, and data switches **(see col. 1 lines 20-26)**. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include receiving a plurality of voice packets relating to a call/session from a plurality of different external networks, because receiving call sessions from a plurality of different networks, as in Lin, is a method for provide data switching for multiple users and access technologies.

Regarding claim 27, Lin teach

(a) a plurality of voice chips being pooled in a common resource pool for performing voice processing operations on media packets originating from a packet network **(see col. 2 lines 29-30 one of multiple processors provided in the internet service node and see col. 9 line 20 IP network)**;

(b) a plurality of network interfaces **(see figure 4 450a-d each processor group interface with the processor interface)** coupled to the voice chips for forwarding incoming media packets originating from the packet network (**see col. 9 line 20 IP network)** to the voice chips and forwarding outbound media packets from the voice chips to external networks **(see col. 8 lines 5-13 transmission to the trunk line card)** wherein each network interface includes a resource allocation table being dynamically constructed from incoming media packets **(see col. 14 lines 43-53 IP table)** and

(c) a dynamic resource manager operatively associated with the packet interfaces and the voice chips for dynamically allocating voice chips from the common resource pool to process new sessions originating from the packet network on a per session basis **(see col. 2 lines 31-35 Each IP packet may be associated with a subscriber and the P packets corresponding to a subscriber may need to be assigned to a processor designed to provide the service policies desired by the subscriber)**.

Lin does not explicitly disclose wherein the resource allocation table includes a local IP address and local UDP port combination assigned to each session. However, Lin discloses assigning a group IP address **(see col. 14 lines33-37)**, and UDP destination port number **(see col. 14 lines 54-58)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include associating the local IP address and local UDP port with the voice chip assigned to each session, because allocating a local IP address and local UDP port for each session, as in Lin, is a method for provide data switching for multiple users and access technologies.

Regarding claim 28, Lin does not explicitly disclose the resource allocation table in each network interface includes a remote IP and UDP port combination associated with each session.

However, Lin discloses IP table **(see col. 13 lines 15-26 IP table),** and assigning a group IP address **(see col. 14 lines33-37)**, and UDP destination port number **(see col. 14 lines 54-58)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include allocation table in each network interface includes a remote IP and UDP port combination associated with each session, because allocating table in each network interface includes a remote IP and UDP combination associated with each session, as in Lin, is a method for provide data switching for multiple users and access technologies.

Regarding claim 30, Lin teaches a system for dynamically media gateway resource allocation on a per session basis, the system **(see col. 4 line 48 data switch)** comprising:

(a) a plurality of voice chips being pooled in a common resource pool for performing voice processing operations on media packets **(see col. 2 lines 29-30 one of multiple processors provided in the internet service node)**;

(b) a plurality of network interfaces **(see figure 4 450a-d each processor group interface with the processor interface)** coupled to the voice chips for forwarding incoming media packets to the voice chips and forwarding outbound media packets from the voice chips to external networks **(see col. 8 lines 5-13 transmission to the trunk line card)**; and

(c) a dynamic resource manager operatively associated with the packet interfaces **(see figure 4 450a-d each processor group interface with the processor interface)** and the voice chips for dynamically allocating voice chips from the common resource pool to process new sessions on a per session basis **(see col. 2 lines 31-35 Each IP packet may be associated with a subscriber**

and the P packets corresponding to a subscriber may need to be assigned to a processor designed to provide the service policies desired by the subscriber) wherein the controller dynamically assigns a session identifier to each new session **(see col. 11 lines 45 tunnel ID assigned)** and

Lin does not explicitly disclose wherein the session identifier includes a local IP address and local UDP port combination. However, Lin discloses assigning a group IP address **(see col. 14 lines33-37)**, and UDP destination port number **(see col. 14 lines 54-58)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the session identifier includes a local IP address and local UDP port combination, because the session identifier includes a local IP address and local UDP port combination, as in Lin, is a method for provide data switching for multiple users and access technologies.

Regarding claim 31, Lin does not explicitly disclose wherein the session identifier includes a remote IP address and remote UDP port combination. However, Lin discloses assigning a group IP address **(see col. 14 lines33-37)**, and UDP destination port number **(see col. 14 lines 54-58)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the session identifier includes a local IP address and local UDP port combination, because the session identifier includes a local IP address and local UDP port combination, as in Lin, is a method for provide data switching for multiple users and access technologies.

Regarding claim 34, Lin teaches a computer program product comprising computer executable instructions embodied in a tangible computer readable medium and which when executed by a processor of a computer perform steps **(see Lin col. 4 line 53)** comprising:

(a) for each new call/session **(see col. 2 line 50)**, dynamically allocating a voice chip from a pool of voice chips to process media packets associated with the session **(see col. 2 lines 31-35 Each IP packet may be associated with a subscriber and the P packets corresponding to a subscriber may need to be assigned to a processor designed to provide the service policies desired by the subscriber)**;

(b) dynamically assigning a logical resource identifier to each session **(see col. 11 lines 45 tunnel ID assigned)**.

(d) processing voice packets **(see col. 2 line 50)** associated with each session using the voice chip dynamically assigned to the session **(see col. 2 lines 31-35 Each IP packet may be associated with a subscriber and the P packets corresponding to a subscriber may need to be assigned to a processor designed to provide the service policies desired by the subscriber)**.

Lin does not explicitly disclose:

- wherein dynamically assigning a logical resource identifier to each session includes dynamically allocating a local IP address and local UDP port for each session;

- (c) receiving a plurality of media packets relating to a session from a plurality of different external networks and sending a plurality of media packets relating to the session to the external networks; and

However, Lin discloses assigning a group IP address **(see col. 14 lines33-37)**, and UDP destination port number **(see col. 14 lines 54-58)**.

And Lin also teaches different access technologies **(see col.5 lines 40-46)** and in the background of Lin also discloses data switches are often used in a telecommunication network to provide connectivity between different end systems. Computer systems accessing each other are examples of end systems. A telecommunication network may include different types of equipment such as access multiplexers, modems, and data switches **(see col. 1 lines 20-26)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include:

dynamically allocating a local IP address and local UDP port for each session; and

receiving a plurality of voice packets relating to a call/session from a plurality of different external networks, because allocating a local IP address and local UDP port for each session, and receiving call sessions from a plurality of different networks, as in Lin, is a method for provide data switching for multiple users and access technologies.

Regarding claim 35, Lin teaches receiving and sending voice packets includes receiving and sending voice packets over an Internet Protocol (IP) network **(see col. 9 line 20 IP network)**.

Regarding claim 36, Lin teaches receiving and sending voice packets includes receiving and sending voice packets transmitted over an ATM **(see col. 2 line 40 ATM)**, Ethernet **(see col. 15 line 34 Ethernet)**, SONET **(see col. 6 line 42 SONET)**, or MPLS network

Regarding claim 41, Lin does not explicitly disclose associate the local IP address and local UDP port with the voice chip assigned to each session

However, Lin discloses assigning a group IP address **(see col. 14 lines33-37)**, and UDP destination port number **(see col. 14 lines 54-58)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include associating the local IP address and local UDP port with the voice chip assigned to each session, because allocating a local IP address and local UDP port for each session, as in Lin, is a method for provide data switching for multiple users and access technologies.

Regarding claim 42, Lin teaches dynamically assigning a logical resource identifier to each session includes dynamically receiving via call signaling path **(see col. 15 lines 9-15)** or learning at run-time a remote IP address and a remote UDP port representing the remote endpoint in each session.

Allowable Subject Matter

5. Claims 2-8, 10-26, 29, and 32-33 are allowed. The reason for allowance is the prior art does not teach the combinational limitation of the following:

Regarding claim 2,

(a) pooling voice server resources provided by a plurality of voice chips in the media gateway, wherein pooling voice server resources includes combining M voice server cards into the shared pool of voice server resources, M being an integer, wherein each voice server card includes Nm voice chips, Nm being an integer representing the number of voice chips on the m^m voice server card, and each voice chip supports Kmn voice channels, Kmn being an integer representing

the number of channels of the n^m voice chip on the m^{th} voice server card;

(b) for each new call/session originating from the packet network, dynamically allocating a voice chip from the pooled voice server resources;

(c) dynamically assigning a Logical resource identifier to each session;

(d) receiving a plurality of voice packets relating to a call/session from a plurality of different external networks and sending a plurality of voice packets relating to the call/session to the external networks; and

(e) processing voice packets associated with each session using the voice chip dynamically assigned to the session.

Regarding claim 17,

(a) pooling voice server resources provided by a plurality of voice chips in the media gateway;

(b) for each new call/session, dynamically allocating a voice chip from the

pooled voice server resources;

(c) dynamically assigning a logical resource identifier to each session;

(d) receiving a plurality of voice packets relating to a call/session from a plurality of different external networks and sending a plurality of voice packets relating to the call/session to the external networks;

(e) terminating a data link layer connection associated with each session at one of a plurality of network interface cards within the media gateway; and

(f) processing voice packets associated with each session using the voice chip dynamically assigned to the session wherein processing voice packets associated with each session using the assigned voice processing resource includes forwarding packets from the network interface card to the voice processing resource using the logical resource identifier assigned to each session and one or more addresses in each received packet and wherein forwarding each packet to the assigned voice processing resource includes forwarding each packet by comparing a destination IP address, destination UDP port combination in each packet to a plurality of destination IP address, destination UDP port combinations assigned to active sessions in the media gateway.

Regarding claim 18,

A method for dynamic media

.gateway resource management, the method comprising:

at a media gateway for switching voice packets between a plurality of input ports

and output ports;

(a) pooling voice server resources provided by a plurality of voice chips in the media gateway;

(b) for each new call/session, dynamically allocating a voice chip from the pooled voice server .resources;

(c) dynamically assigning a logical resource identifier to each session;

(d) receiving a plurality of voice packets relating to a call/session from a plurality of different external networks and sending a plurality of voice packets relating to the call/session to the external networks;

(e) terminating a data link layer connection associated with each session at one of a plurality of network interface cards within the media gateway; and

(f) processing voice packets associated with each session using the voice chip dynamically assigned to the session wherein processing voice packets associated with each session using the assigned voice processing resource includes forwarding packets from the network interface card to the voice processing resource using the logical resource identifier assigned to each session and one or more addresses in each received packet and wherein forwarding each packet to the assigned voice processing resource includes forwarding each packet by comparing a destination IP address, destination UDP port, source IP address, source UDP port combination in each packet to a plurality of local IP address,

local UDP port, remote IP address, remote UDP port combinations assigned to active sessions in the media gateway.

Regarding claim 19,

(a) a plurality of voice chips being pooled in a common resource pool for performing voice processing operations on media packets associated with a session, wherein pooling voice server resources includes combining M voice server cards into the shared pool of voice server resources, M being an integer, wherein each voice server card includes Nm voice chips, N_m being an integer representing the number of voice chips on the mth voice server card, and each voice chip supports Kin on voice channels, K~n being and integer representing the number of channels of the nth voice chip on the mm voice server card where Nm and Km_n are different for at least some of the voice chips;

(b) a plurality of network interfaces coupled to the voice chips for forwarding incoming media packets to the voice chips and forwarding outbound media packets from the voice chips to external networks; and

(c) a dynamic resource manager operatively associated with the packet interfaces and the voice chips for dynamically allocating voice chips from the common resource pool to process new sessions on a per session basis and dynamically assigning a logical resource identifier to each session.

6. Claims 37-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments, see applicant's remarks (pages 16-18), filed 9/11/2007, with respect to claims 34-42 have been fully considered and are persuasive. The 101 and 112 1st rejections of claims 34-42 has been withdrawn.

8. Applicant's arguments, see applicant's remarks (pages 18-22), filed 9/11/2007, with respect to claims 1, 6-8, 11, 14-16, 19-20, 22-26, 29, and 32-36 have been fully considered and are persuasive. The 103 rejection of 1, 6-8, 11, 14-16, 19-20, 22-26, 29, and 32-36 has been withdrawn.

9. Applicant's arguments, see applicant's remarks (pages 22), filed 9/11/2007, with respect to claims 10 and 21 have been fully considered and are persuasive. The 103 rejection of 10 and 21 has been withdrawn.

10. Applicant's arguments, see applicant's remarks (pages 23), filed 9/11/2007, with respect to claims 12-13 have been fully considered and are persuasive. The 103 rejection of 12-13 has been withdrawn.

11. Applicant's arguments with respect to claim 9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnson et al. (US7212519), Curtis (US2002/0191612),

Hansson et all. (US2002/0012352), Temoshenko et al. (US7177943)

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wutchung Chu whose telephone number is 571 270 1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan D. Orgad can be reached on 571 272 7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WC/
Wutchung Chu

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SUPERVISORY PATENT EXAMINER